



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,080	12/05/2000	Kazutaka Saitoh	IIZ.018	3263

7590 11/21/2003  
JONES VOLENTINE, L.L.P.  
Suite 150  
12200 Sunrise Vally Drive  
Reston, VA 20191

EXAMINER

THOMPSON, ANNETTE M

ART UNIT	PAPER NUMBER
----------	--------------

2825

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

GA

**Office Action Summary**

Application No.

09/729,080

Applicant(s)

SAITOH, KAZUTAKA

Examiner

A. M. Thompson

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-6,8,11-13,15-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,8,11,15-18,21 and 23 is/are rejected.
- 7) ☒ Claim(s) 5,6,12,13,19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### **DETAILED ACTION**

Applicant's amendment to 09/729,080 has been examined. The title, specification, and drawings are amended. Claims 8, 12, 21, and 23 are amended. Claims 9, 10 and 14 are cancelled. Claims 1, 4-6, 8, 11-13, 15-21 and 23 are pending.

1. Upon further consideration of the claims, a new ground of rejection has been applied to some claims. Accordingly, prosecution is restarted and this third non-final office action on the merits issues.

#### ***Claim Objections***

2. Claims 4-6, 12, 13, and 19-21 are objected to because of the following informalities: Pursuant to claim 12, at line 6, use the gerund form of "enables"; at line 14, change "A ROM" to *--the ROM--*. Pursuant to claim 13, this claim recites the conductive line having two ends extending in a direction different from that claimed in independent claim 12; since the conductive line only has two ends Applicants must decide and claim one of the two limitations in either claim 12 or 13 or rewrite the claims in an appropriate manner to cover the specific configuration limitations. Pursuant to claim 21, at line 11, change "a Rom" to *- the ROM- -*. Pursuant to claims 4, 5, 6, 19 and 20, change "a ROM" to *--the ROM--*. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Rejection of claims 1, 4, 15-18 and 23**

4. **Claims 1, 4, 15-18 and 23** are rejected under 35 U.S.C. 102(e) as being anticipated by Spitzer et al., U.S. Patent 6,483,740 (claims priority to provisional application filed July 11, 2000).

5. Pursuant to claim 1, which recites a semiconductor integrated circuit (Figs. 20-23) comprising a ROM ([0160, 0161, 0169]) having bit lines extending in a first direction in a first layer; and a conductive line arranged in a second layer, located above the first layer, wherein the conductive line partially extends in a second direction, which is orthogonal to the first direction to pass across the bit lines, and is shaped to be a step form having a part extending in the first direction (Fig 11 illustrates these limitations; [0057]).

6. Pursuant to claim 4, wherein the conductive line has two ends extending toward upper and lower portions of a ROM block (Fig. 11).

7. Pursuant to claims 15-18, see Fig. 11 and [0088].

8. Pursuant to claim 23, Fig. 11 illustrates the limitations of this independent claim; see also [0057].

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Rejection of claims 8, 11 and 21**

10. **Claims 8, 11 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Spitzer et al., U.S. Patent 6,483,740. Applicant's specification discloses the components of a Smart Card (specification, pages 1, 2). Applicant's specification additionally discloses the component ROM of a Smart Card as including first and second layers. However, Applicant's specification is silent on a ROM structure being comprised of diagonal bit lines. Spitzer discloses a high density semiconductor memory having diagonal bit lines and dual word bit lines (see Spitzer, Fig. 11). Mueller uses the exemplary embodiment of a DRAM chip but expands the invention application to other memory structures, such as a ROM, at column 4, lines 5-10. Smart card designs are small in size and it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to use the Spitzer type of memory design for increased area efficiency.

11. Pursuant to claim 8, which recites [a] smart card comprising a ROM; a CPU using a runnable program. . . ; a RAM, which enables the CPU to enter and use the temporary data during its operation, wherein the ROM having bit lines extending in a first direction in a first layer and a conductive arranged in a second layer, located above the first layer, wherein the conductive line partially extends in a second direction which is orthogonal to the first direction, to pass across the bit lines (Fig. 11, [0088]).

12. Pursuant to claim 11, wherein the conductive line has two ends extending toward upper and lower portions of a ROM block, respectively (see Fig. 11).

Art Unit: 2825

13. Pursuant to claim 21, it addresses limitations already rejected by claim, and is therefore likewise rejected based on similar reasoning.

***Allowable Subject Matter***

14. Claims 5, 6, 19, 20, contain allowable subject matter.

15. The reasons for the indication of allowable subject matter include a lack of teaching in the prior art regarding the specific ROM configuration wherein the ROM conductive lines extend towards a right upper portion and a left lower portion of the ROM block; additionally, the prior art does not disclose ROM conductive lines having two ends extending toward the same side of a ROM block.

***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please reference the PTO-892 for a complete listing.

17. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to A.M. Thompson whose telephone number is (703) 305-7441. The Examiner can usually be reached Monday thru Friday from 8:00 a.m. to 5:00 p.m.. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Matthew S. Smith, can be reached on (703) 308-1323.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956 or the Customer Service Center whose telephone number is (703) 306-3329.

18. Responses to this action should be mailed to:

Commissioner for Patents  
P.O. Box 1450

Application/Control Number: 09/729,080  
Art Unit: 2825

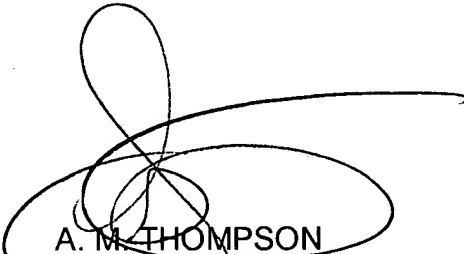
Page 6

Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for all **OFFICIAL** communications intended for entry)

Hand-delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).



A. M. THOMPSON  
Master's Level Patent Examiner